

TECHNOLOGY

# The U.S. Cities With the Most Cutting-Edge Tech Workers

Traditional tech hubs still have the most future-ready workforces, but a new wave of cities is on the rise

By *Kevin McAllister* [Follow](#)

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The Seattle area has the highest proportion of advanced tech workers in the country relative to cities with similarly sized tech workforces, a new ranking from the Burning Glass Institute shows. Home to Amazon.com and Microsoft MSFT 1.52% ▲, Seattle bested other West Coast hubs in attracting talent with cutting-edge skills, while cities weighed down by legacy tech jobs fell further behind.

What makes a cutting-edge city? Burning Glass ranked established and aspiring tech hubs across the U.S. by the share of their tech workforce that boasts a set of cutting-edge skills: those that are most in-demand and most well-paid.

The resulting ranking shows which cities across the country are fertile ground for companies looking to hire for roles requiring advanced skills or expand into new markets. At the opposite end of the spectrum are cities where finding highly skilled workers is becoming more difficult.

“This ranking has a lot of really important lessons here for cities and some warning signs,” says Matt Sigelman, president of the Burning Glass Institute. “You can be a city with a relatively large tech workforce, but if that tech workforce doesn’t have the same concentration of the most valuable talent, of the most valuable skills, then you can lose your edge very quickly.”

## The method

To determine the rankings, Burning Glass first identified a set of tech skills associated with higher market demand and higher pay across the country using job postings and career history data from 60 million workers via Lightcast, a labor-market analytics firm. Among that group of cutting-edge skills are skills related to cloud and serverless computing, machine learning and artificial-intelligence architecture and cybersecurity operations.



The Amazon Spheres, part of the Amazon headquarters campus in Seattle. PHOTO: DAVID RYDER/BLOOMBERG NEWS

Each city was then evaluated and ranked based on the share of its tech workers—which included workers in tech roles outside of the tech sector—who possessed at least one of those skills. A separate momentum ranking looked at the growth in demand for workers with advanced skills within each city as well as the general growth of the area’s tech workforce between 2017 and 2022.

Traditional tech hubs like the Seattle, San Jose, Calif., and San Francisco metro areas populate the upper tier of the list of cities with the greatest proportion of skills. But the position of historically blue-collar cities in the momentum ranking shows the broad impact that tech has had on a changing American workforce, despite the contractions among large tech companies in the past 18 months. Pittsburgh ranked fifth among all large cities in the momentum ranking, followed closely by the Kansas City metropolitan area in sixth.

Some cities that have been considered hot spots for tech workers fleeing the Bay Area and other hubs, like cryptocurrency-bolstered Miami and Amazon HQ2 locale Washington, D.C., fared worse in the analysis. On the momentum list, Miami was among the top 10, but on the cutting-

edge skills list, it trailed other Southern cities like Atlanta and Raleigh, N.C. Meanwhile, Washington, D.C., finished in the bottom quarter of the skills ranking and is trending in the wrong direction, finishing last in the momentum ranking.

The sizable Washington, D.C., tech ecosystem was still growing over the analysis period, according to data from Burning Glass, but the types of tech jobs being recruited for and the workers filling them were less likely to require or have the most cutting-edge tech skills when compared with other cities across the country.

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### The Most Cutting-Edge Large Cities (Metro Areas)

METRO AREA	CUTTING-EDGE SKILLS RANK	MOMENTUM RANK
Seattle-Tacoma-Bellevue, Wash.	1	1
San Jose-Sunnyvale-Santa Clara, Calif.	2	2
San Francisco-Oakland-Berkeley, Calif.	3	3
Boston-Cambridge-Newton, Mass./N.H.	4	7
Austin-Round Rock-Georgetown, Texas	5	4
San Diego-Chula Vista-Carlsbad, Calif.	6	13
New York-Newark-Jersey City, N.Y./N.J./Pa.	7	9
Los Angeles-Long Beach-Anaheim, Calif.	8	8
Portland-Vancouver-Hillsboro, Ore./Wash.	9	16
Raleigh-Cary, N.C.	10	21

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Methodology: The cutting-edge skills rankings were determined based on the proportion of a metro area's tech workers that possessed at least one of a set of advanced tech skills, defined by Burning Glass as those skills that both commanded the highest salaries and were in highest demand. Using data from labor market analytics firm Lightcast, demand was determined by the likelihood of advanced skills appearing in job postings. Salary premiums were determined by the average increase in wages for a role that requested an advanced skill compared to a role that did not, controlling for differences otherwise attributable to occupation, education or seniority levels. Momentum rankings were determined by the growth in demand for those advanced skills in job postings in 2020-2022 compared to job postings in 2017-2019. They also included two measures of the growth of the tech labor market, both in terms of the number of people working in tech-related occupations as well as the share of an area's workers employed in those occupations. Large cities were those with more than 25,000 tech workers. Midsize cities had between 5,000 and 24,999 tech workers. Small cities had fewer than 5,000 tech workers.

Sources: The Burning Glass Institute, Lightcast, U.S. Census' American Community Survey

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### Lower-tech D.C.

Part of the reason for that could be the overlap between the tech workforce and government agencies. Those agencies often rely heavily on legacy systems, says Kevin Walsh, director of IT and cybersecurity at the U.S. Government Accountability Office, who testified on government modernization in front of Congress in May.

In some cases the government relies on older IT for the right reasons, including being responsible stewards of taxpayer dollars, he says. But in many others, the reliance on sometimes decades-old systems for critical operations means that staffing tech jobs becomes an issue, alongside security risks. Walsh notes that his office found that the Internal Revenue Service was using software that was up to 15 versions out of date as recently as last year.

"The thing we often struggle with in the government is finding someone who is able to transfer or modernize that old code into a more modern and usable framework," Walsh says, adding that there have been instances where government agencies have had to rehire retirees because the skills necessary to operate those legacy systems still core to government operations get lost. "The legacy problem is not going to go away as long as technology continues to evolve," he says.

It is hardly new that the Seattle, San Jose and San Francisco metro areas are leading the pack when it comes to tech workforces. These West Coast tech hubs maintained their skills lead even as the tech sector reeled in 2022 from widespread layoffs. Seattle has the largest share of employees in the software-products industry at nearly 13% of the nationwide total, according to the trade group CompTIA in the annual State

of the Tech Workforce report. And among the two most recent cohorts of companies to be a part of the startup accelerator Y Combinator, more than half were based in San Francisco.

The trend of tech workforce leaders opening up larger gaps in the talent pool wasn't limited to the country's largest metro areas. The top two midsize cities in terms of frontier skills, Provo, Utah, and Fayetteville, Ark., were third and first respectively in the momentum ranking.

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#### The Most Cutting-Edge Midsize Cities (Metro Areas)

METRO AREA	CUTTING-EDGE SKILLS RANK	MOMENTUM RANK
Provo-Orem, Utah	1	3
Fayetteville-Springdale-Rogers, Ark.	2	1
Salt Lake City, Utah	3	8
Manchester-Nashua, N.H.	4	20
Ann Arbor, Mich.	5	6
San Antonio-New Braunfels, Texas	6	13
Boise City, Idaho	7	24
Worcester, Mass./Conn.	8	15
Rochester, N.Y.	9	9
Ogden-Clearfield, Utah	10	41

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Sources: The Burning Glass Institute, Lightcast, U.S. Census' American Community Survey

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In the so-called Silicon Slopes, the tech ecosystems in Provo and third-ranked Salt Lake City have thrived since the 2007-09 recession. Since building a Utah campus in 2012, Adobe has maintained a large presence in Lehi, Utah, further expanding to accommodate 1,000 more employees in 2020. The Milken Institute recently rated the Provo-Orem area as the best-performing city for jobs and growth in the U.S. for the third straight year, in part due to its economic growth related to tech.

But the growth of tech jobs and frontier skills doesn't just happen at tech companies, especially in some of the areas that performed the best across the country. The bank Zions Bancorp **ZION 1.80%** ▲ opened a technology campus in Utah in 2022. And in the Fayetteville area, which includes Walmart's **WMT 1.31%** ▲ Bentonville headquarters, Burning Glass attributes some of the strong performance to Walmart's deeper tech investments.

"Increasingly you're seeing that Main Street is becoming tech, Main Street is being driven by data," Sigelman says. "Some of these frontier skills that are growing the fastest and are commanding the highest value show up in places where you wouldn't have seen them in the past."

In the Kansas City metro area, which ranks sixth among large cities in the momentum ranking, nearly one out of every three tech workers is employed by a company outside the sector, according to Kara Lowe, CEO of the Kansas City Tech Council, an advocacy group that aims to expand the tech ecosystem in the area.

## The Most Cutting-Edge Small Cities (Metro Areas)

Search...

METRO AREA	CUTTING-EDGE SKILLS RANK	MOMENTUM RANK
Santa Maria-Santa Barbara, Calif.	1	23
Santa Cruz-Watsonville, Calif.	2	31
San Luis Obispo-Paso Robles, Calif.	3	5
Naples-Marco Island, Fla.	4	39
Blacksburg-Christiansburg, Va.	5	62
Bend, Ore.	6	7
Santa Rosa-Petaluma, Calif.	7	89
Palm Bay-Melbourne-Titusville, Fla.	8	72
Spokane-Spokane Valley, Wash.	9	17
Reno, Nev.	10	28

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Still, a technology company making any kind of direct investment can have the effect of attracting talent with frontier skills to the area. Facebook parent Meta Platforms **META 2.40%** ▲ announced last year that it was investing \$800 million into a data center complex in Kansas City, Mo., which Lowe says she hopes will encourage other companies to continue bringing new business to the area.

"I do think that there is a radar effect that tends to happen when a region attracts those top shelf tech brands," Lowe says.



The tech industry has grown in Kansas City, Mo., and the overall metro area. PHOTO: MICHAEL SILUK/UCG/UNIVERSAL IMAGES GROUP/GETTY IMAGES

## A farm system of talent

The growth of the broader tech industry in the Kansas City metro area in recent years, she adds, is due in part to the intellectual capital in the city—but that companies in the area are also working to build what she calls the “major-league baseball farm system of talent” through apprenticeships and skills development programs that keep tech workers engaged not just with employers but with the broader community. That is something that Lowe says is especially important as remote work continues to provide opportunities for workers to do tech jobs outside of tech hubs, whether those be established or on the rise.

Courting and retaining talent through remote work is one thing that many small and some midsize cities that shot up the ranking have in common, Sigelman says, highlighting that many of the cities at the top of the ranking of small cities have great quality of life. But even among the largest cities, the movement of people and companies can lead to significant volatility.

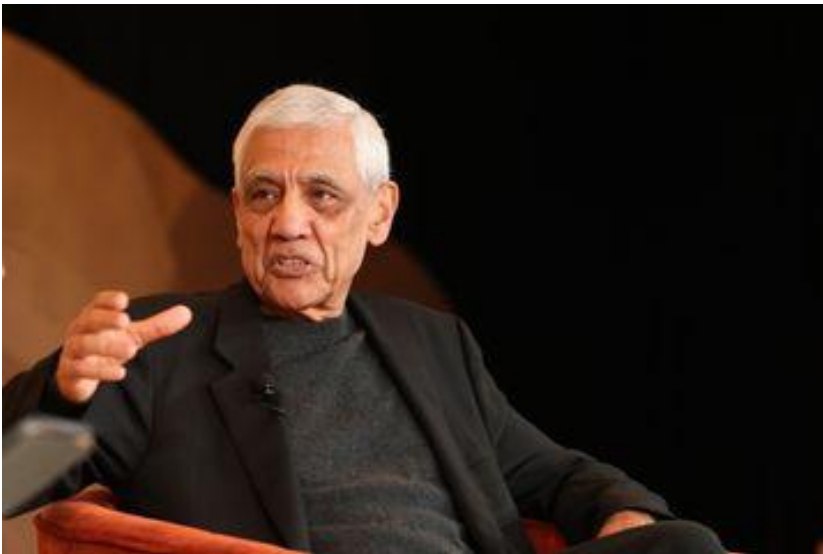
“Demand doesn’t stay stable; the nature of skills that are needed doesn’t stay stable,” Sigelman says. “Some of the cities that are growing their workforces the fastest, that are building up a concentration of advanced skills, could climb significantly.”

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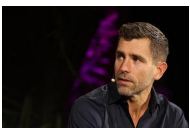
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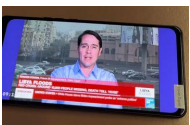
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